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EXAMINER	
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ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/693,938	SAMPATH ET AL.
	Examiner	**Art Unit**
	Charles Chow	2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *See Continuation Sheet* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *See Continuation Sheet* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 1,3,4,6-19,21-23,25,27-32,34-36,38-45,47,48,50-61,63-65,67,69-73,75-77 and 79-83.

Continuation of Disposition of Claims: Claims rejected are 1, 3-4,6-19, 21-23, 25, 27-32, 34-36, 38-45, 47-48, 50-61, 63-65, 67, 69-73, 75-77, 79-83.

Detailed Action

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 3-7, 10-15, 18-19, 21-23, 25, 27-28, 31-32, 34-36, 38-39, 40-45, 47-48, 50-51, 54-57, 60-61, 63-65, 67, 69, 72-73, 75-77, 79-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani et al. (US 6,222,830 B1) in view of Eaton (US 5,886,645).

Regarding **claim 1**, Padovani teaches a frame selection system (Fig. 1, Fig.3, system comprising a base station BST 102 A-C) adapted to generate at least one enhanced frame (the channel processor 216 generates a quality frame 305 with FQM 308, frame quality metric information, as the enhanced frame, Fig. 3, col. 7, lines 47-67). Padovani teaches the combining an acceptable portion of the enhanced frame with an acceptable portion of the enhanced frame copy based on the error burst representations to from a combined frame of a higher quality than the enhanced frame [the combining frames F(1)-F(3) with frames F(B)(1)-F(b)(3) with their associated FQM M(A)(1) to M(B)(3), to generate a higher quality new single frame C, having only F(A)(3), F(B)(2) and F(A)(1) in resultant frame, based on the selection of higher FQM metric values, Fig. 5, col. 9, lines 19-40]. Padovani further teaches the frame quality is above a threshold, below a threshold, and the discarding the enhanced frame during combining (the selector element resource will determine which packet 305 has the highest FQM value, for continue processing the frame with highest FQM

quality value, and discard other frames with lower quality, for a threshold of highest FQM metric value, as shown in col. 8, line 60 to col. 9, line 2).

Padovani fails to teach clearly the frame copy, although Padovani considered the quarter rate frame is duplicated four times (col. 5, lines 11-12) for making copies of a frame. Eaton et al. (Eaton) teaches generating a frame copy, for the enhanced frame by duplicating first information frame into a second information frame (abstract), having duplicator 235 (Fig. 4), the duplicator operating for generating duplicated frame (Fig. 13, abstract; col. 11, lines 25-38, col. 12, lines 47-65). Eaton teaches the duplicated home frame 1 at frame location 31 (Fig. 5, col. 9, line 61 to col. 10, line 2), the combining of the field bits for the current and previous frames when received frame number is indicative of a duplicated frame (col. 15, lines 15 to 53). Eaton teaches an improved efficient technique for preventing message from lost during transmission by duplicating a message frame in acknowledge back without decreasing system capacity, without delaying of the message frame delivery (col. 2, line 62 to col. 3, line 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovane above with Eaton's duplicating of a message frame, such that system could reduce the message frame lost during transmission.

Regarding **claim 3**, Padovani teaches in claim 1 above for adapted to generate a primary enhanced frame (305) with frame quality control information 308 inserted into the frame.

Regarding **claim 4**, Padovani teaches in claim 1 above the generating of an enhanced frame with FQM, in combination with Eaton teaching in claim 1 for the generating an parallel frame by duplicating first information frame into a second information frame.

Regarding **claim 6**, Padovani teaches adapted to store each of the error burst representations within a respective frame (the base station storing the error burst representation FQM 308 into the frame 305, Fig. 3, abstract, col. 2, lines 51-64, for the respective frame F(A) (1) to F(B)(3) in Fig. 5).

Regarding **claim 7**, Padovani teaches the adapted to store each of the error burst representation with a respective frame quality indicator field (Fig. 5, the FQM for each respective frame F(A) (1) to F(B)(3), the M(A)(1) to M(A)(3), M(B)(1) to M(B)(3)).

Regarding **claim 10**, Padovani teaches the system comprising a wireless communications base station (the wireless communication base station in Fig. 1, col. 3, lines 29-32, col. 3, lines 41-42).

Regarding **claim 11**, Padovani teaches the error burst representations (FQM) are associated with a field or section of a respective frame (Fig. 5, the FQM for each respective frame F(A) (1) to F(B)(3), the M(A)(1) to M(A)(3), M(B)(1) to M(B)(3)).

Regarding **claim 12**, Padovani teaches adapted to evaluate a frame quality of the enhanced frame (a base station controller BSC 104 evaluates the FQM metric of enhanced frame 305 during the process for selecting a frame, abstract, col. 2, lines 63-64).

Regarding **claim 13**, Padovani teaches further adapted to analyze at least one error burst representation within the enhanced frame (a base station controller BSC analyze the error burst representations, such as CRC, Yamamoto metric, FF-Ser, within the enhance frame abstract, col. 2, lines 63-64; col. 8, line 63 to col. 9, line 2).

Regarding **claim 14**, Padovani teaches the frame selection unit FSU (selector resource 500, Fig. 5; the selector 404, Fig. 4; col. 8, lines 32-54).

Regarding **claims 15, 28, 69,** Padovani teaches the accepting the enhanced frame if the frame quality (FQM) of the enhanced frame is above a threshold (the highest FQM quality value is the threshold for selecting the best frame, col. 8, lines 60 to col. 9, line 2). Padovani teaches the discarding the enhanced frame and requesting a replacement copy of the enhance frame if the frame quality of the enhanced frame is below the threshold (the selector element resource will determine which packet 305 has the highest FQM value, for continue processing the frame with highest FQM quality value, and discard other frames with lower quality, for a threshold of highest FQM metric value, as shown in col. 8, line 60 to col. 9, line 2).

Regarding **claim 18**, Padovani teaches the evaluated the frame quality of the enhanced frame based on a quality of a field or section of the enhanced frame (a base station controller BSC 104 evaluates the FQM metric of a frame 305, abstract, col. 2, lines 63-64, the Yamamoto metric, the re-encoded signal error rate SER, for a field or section of a frame in col. 1, line 64 to col. 2, line 44).

Regarding **claims 19, 61**, Padovani taught in claim 1 above for generating a combined frame (combined frame C in Fig. 5, col. 9, lines 26-34).

Regarding **claims 21, 34, 41, 63, 76, 81,** Padovani teaches the combining of the enhanced frames in claim 1, and Eaton taught in claim 1 above the adapted to combine an acceptable portion from a field or section of the enhanced frame and an acceptable portion from a same field or section of the enhanced frame copy (the combine the first and second information frames, col. 18, lines 36-40, abstract).

Regarding **claims 22, 35, 42, 64, 77, 82,** Padovani teaches the combining of enhanced frames based on the quality metric in claim 1, and Eaton teaches the combining an acceptable

portion from a field or section of an enhanced primary frame and an acceptable portion from a same field or section of an enhance parallel frame (the combine the first and second information frames, col. 18, lines 36-40, abstract, the same field to recover the missed paging messages).

Regarding **claims 23, 36, 43, 65,** Padovani teaches the evaluating of a frame based on a quality of a field or section of the enhanced frame (a base station controller BSC 104 evaluates the FQM metric of enhance frame during the process for selecting a frame (abstract, col. 2, lines 63-64, in claim 1 above), and Eaton teaches the duplication of frame messages for frame message combining, in claim 1, such that the duplicated enhanced frame copy from Eaton could be evaluated by Padavani's BSC based on a quality of a field or section of the enhanced frame copy.

Regarding **claim 25**, Padovani teaches a device (base station controller BSC 104, abstract, col. 2, lines 63-64) analyze at least one error burst representation (FQM) within an enhanced frame [frame 305, the evaluating of the FQM for frames F(A) (1) to F(B)(3)], analyze at least one error burst representation within an second enhanced frame (the evaluation of the FQM for frames F(A) (1) to F(B)(3)]. Padovani teaches the combining an acceptable portion of the enhanced frame with an acceptable portion of the enhanced frame copy based on the error burst representations to from a combined frame of a higher quality than the enhanced frame [the combining frames F(1)-F(3) with frames F(B)(1)-F(b)(3) with their associated FQM M(A)(1) to M(B)(3), to generate a higher quality new single frame C, having only F(A)(3), F(B)(2) and F(A)(1) in resultant frame, based on the selection of higher FQM metric values, Fig. 5, col. 9, lines 19-40].

Padovani fails to teach clearly above the frame copy, although Padovani considered the quarter rate frame is duplicated four times (col. 5, lines 11-12). Eaton et al. (Eaton) teaches generating a frame copy, for the enhanced frame by duplicating first information frame into a second information frame (abstract), having duplicator 235 (Fig. 4), the duplicator operating for generating duplicated frame (Fig. 13, abstract; col. 11, lines 25-38, col. 12, lines 47-65), the second information duplicates all of the first information (col. 18, lines 51-53), to combine the first and second information frames (col. 18, lines 36-40). Eaton teaches an improved efficient technique for preventing message from lost during transmission by duplicating a message frame in acknowledge back without decreasing system capacity, without delaying of the message frame delivery (col. 2, line 48 to col. 3, line 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovane above with Eaton's duplicating of a message frame, such that system could reduce the message frame lost during transmission.

Regarding **claim 27**, Padovani teaches the FSU (500, selector system 404 of BSC 104, Fig. 4; col. 8, lines 32-54).

Regarding **claim 31**, Padovani teaches a base station controller BSC 104 evaluates the FQM metric of enhance frame during the process for selecting a frame (abstract, col. 2, lines 63-64, the quality of the field or section from the quality measurement of Yamamoto metric, SER in col. 1, line 64 to col. 2, line 44).

Regarding **claim 32**, Padovani teaches the generating of combined frame C (Fig. 5, col. 9, lines 28-34).

Regarding **claim 38**, Padovani teaches the device comprises frame selection unit FSU (selector resource 500, Fig. 5).

Regarding **claim 39**, Padovani teaches the adapted to combine an enhanced frame with an enhance frame copy based on an error burst representation within each frame to form a combined frame of a higher quality than the enhanced frame [the combining of frames F(1)-F(3) with frames F(B)(1)-F(b)(3) with their associated FQM metrics, M(A)(1) to M(B)(3), to generate a higher quality new single frame C, having only the selected frames F(A)(3), F(B)(2) and F(A)(1) in resultant frame, based on the selection of higher FQM metric values, Fig. 5, col. 9, lines 19-40]. Eaton teaches the combining of a acceptable portion of a frame with an acceptable portion of a second frame (the duplicates at least some of the first information, and excluding portions of the first information in abstract, the combining of a first frame message with a second frame message, col. 18, lines 36-40).

Regarding **claims 40, 75, 80**, Eaton taught in claim 1 above the adapted to combine an acceptable portion of an primary frame with an acceptable portion of an duplicated parallel frame (the combine the first and second information frames, col. 18, lines 36-40, abstract).

Regarding **claim 44**, Padovani teaches the FSU (selector system 404 of BSC 104, Fig. 4; col. 8, lines 32-54).

Regarding **claim 45**, Padovani teaches a frame selection system (Fig. 1, Fig.3, system comprising a base station BST 102 A-C) adapted to generate at least one enhanced frame (the channel processor 216 generates a quality frame 305 with FQM 308, frame quality metric information, as the enhanced frame, Fig. 3, col. 7, lines 47-67). Padovani teaches the combining an acceptable portion of the enhanced frame with an acceptable portion of the

enhanced frame copy based on the error burst representations to from a combined frame of a higher quality than the enhanced frame [the combining frames F(1)-F(3) with frames F(B)(1)-F(b)(3) with their associated FQM M(A)(1) to M(B)(3), to generate a higher quality new single frame C, having only F(A)(3), F(B)(2) and F(A)(1) in resultant frame, based on the selection of higher FQM metric values, Fig. 5, col. 9, lines 19-40]. Padovani further teaches the frame quality is above a threshold, below a threshold, and the discarding the enhanced frame during combining (the selector element resource will determine which packet 305 has the highest FQM value, for continue processing the frame with highest FQM quality value, and discard other frames with lower quality, for a threshold of highest FQM metric value, as shown in col. 8, line 60 to col. 9, line 2).

Padovani fails to teach clearly above the frame copy, although Padovani considered the quarter rate frame is duplicated four times (col. 5, lines 11-12) for making copies of a frame. Easton et al. (Easton) teaches generating a frame copy, for the enhanced frame by duplicating first information frame into a second information frame (abstract), having duplicator 235 (Fig. 4), the duplicator operating for generating duplicated frame (Fig. 13, abstract; col. 11, lines 25-38, col. 12, lines 47-65), the second information duplicates all of the first information (col. 18, lines 51-53), to combine the first and second information (col. 18, lines 36-40). Easton teaches an improved efficient technique for preventing message from lost during transmission by duplicating a message frame in acknowledge back without decreasing system capacity, without delaying of the message frame delivery (col. 2, line 48 to col. 3, line 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention to modify Padovane above with Easton's duplicating of a message frame, such that system could reduce the message frame lost during transmission.

Regarding **claim 47**, Padovani teaches in claim 1 above for adapted to generate a primary enhanced frame (305) with frame quality control information 308 inserted into the frame.

Regarding **claim 48**, Padovani teaches in claim 1 above the generating of an enhanced frame with FQM, in combination with Eaton teaching for the generating an parallel frame by duplicating all of the first frame message (col. 18, lines 51-53).

Regarding **claim 50**, Padovani teaches the storing of the error burst representation within a respective frame [the storing of each error burst representation FQM, Fig. 5, to each respective frame F(A) (1) to F(B)(3), the M(A)(1) to M(A)(3), M(B)(1) to M(B)(3)].

Regarding **claim 51**, Padovani teaches the storing each of the error burst representation (FQM) within a respective frame quality indicator field (Fig. 5, the FQM for each respective frame F(A) (1) to F(B)(3) is stored at the position in that frame, having respective M(A)(1) to M(B)(3)).

Regarding **claim 54**, Padovani teaches a frame selection system of the BSC 104 based on the base station's quality metric inserted into FQM 308 (as shown above). Padovani discloses the error detection procedure to generate burst representation associated with a field or section of a frame (the given segment of data for CRC in col. 1, lines 55-57; the Yamamoto metric in col. 1 line 64 to col. 2, lines 18).

Regarding **claim 55**, Padovani teaches a base station controller BSC 104 evaluates the FQM metric of enhance frame during the process for selecting a frame (abstract, col. 2, lines 63-64).

Regarding **claim 56**, Padovani teaches a base station controller BSC analyze the error burst representation, CRC, Yamamoto metric, FF-Ser, within the enhance frame (abstract, col. 2, lines 63-64; col. 8, line 63 to col. 9, line 2).

Regarding **claim 57**, Padovani teaches the accepting the enhanced frame if the frame quality (FQM) of the enhanced frame is above a threshold (the highest FQM quality value is the threshold for selecting the best frame, col. 8, lines 60 to col. 9, line 2). Padovani teaches the discarding the enhanced frame and requesting a replacement copy of the enhance frame if the frame quality of the enhanced frame is below the threshold (the selector element resource will determine which packet 305 has the highest FQM value, for continue processing the frame with highest FQM quality value, and discard other frames with lower quality, for a threshold of highest FQM metric value, as shown in col. 8, line 60 to col. 9, line 2).

Regarding **claim 60**, Padovani teaches a base station controller BSC 104 evaluates the FQM metric of enhance frame during the process for selecting a frame (abstract, col. 2, lines 63-64).

Regarding **claim 67**, Padovani teaches a device (base station controller BSC 104, abstract, col. 2, lines 63-64) analyze at least one error burst representation (FQM) within an enhanced frame [frame 305, the evaluating of the FQM for frames F(A) (1) to F(B)(3)], analyze at least one error burst representation within an second enhanced frame (the evaluation of the FQM for frames F(A) (1) to F(B)(3)]. Padovani teaches the combining an acceptable portion of the enhanced frame with an acceptable portion of the enhanced frame copy based on the error burst representations to from a combined frame of a higher quality than the enhanced frame [the combining frames F(1)-F(3) with frames F(B)(1)-F(b)(3) with their associated FQM

M(A)(1) to M(B)(3), to generate a higher quality new single frame C, having only F(A)(3), F(B)(2) and F(A)(1) in resultant frame, based on the selection of higher FQM metric values, Fig. 5, col. 9, lines 19-40].

Padovani fails to teach clearly above the frame copy, although Padovani considered the quarter rate frame is duplicated four times (col. 5, lines 11-12). Easton et al. (Eaton) teaches generating a frame copy, for the enhanced frame by duplicating first information frame into a second information frame (abstract), having duplicator 235 (Fig. 4), the duplicator operating for generating duplicated frame (Fig. 13, abstract; col. 11, lines 25-38, col. 12, lines 47-65), the second information duplicates all of the first information (col. 18, lines 51-53), to combine the first and second information (col. 18, lines 36-40). Easton teaches an improved efficient technique for preventing message from lost during transmission by duplicating a message frame in acknowledge back without decreasing system capacity, without delaying of the message frame delivery (col. 2, line 48 to col. 3, line 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovane above with Easton's duplicating of a message frame, such that system could reduce the message frame lost during transmission.

Regarding **claim 72**, Padovani teaches a base station controller BSC 104 evaluates the FQM metric of enhance frame during the process for selecting a frame (abstract, col. 2, lines 63-64).

Regarding **claim 73**, Padovani teaches the generating of a combined frame C (Fig. 5, col. 9, lines 28-34).

Regarding **claim 79**, Padovani teaches the adapted to combine an enhanced frame with an enhance frame copy based on an error burst representation within each frame to form a combined frame of a higher quality than the enhanced frame [the combining of frames F(1)-F(3) with frames F(B)(1)-F(b)(3) with their associated FQM metrics, M(A)(1) to M(B)(3), to generate a higher quality new single frame C, having only the selected frames F(A)(3), F(B)(2) and F(A)(1) in resultant frame, based on the selection of higher FQM metric values, Fig. 5, col. 9, lines 19-40]. Eaton teaches the combining of a acceptable portion of a frame with an acceptable portion of a second frame (the duplicates at least some of the first information, and excluding portions of the first information in abstract, the combining of a first frame message with a second frame message, col. 18, lines 36-40).

Regarding **claim 83**, Padovani teaches the method comprising evaluating a frame quality (FQM metric) of the enhance frame (such as 305) based on a quality of a field or section of the enhanced frame (a base station controller BSC 104 evaluates the FQM metric field of a section of a enhance frame, such as 305, during the process for selecting a frame, abstract, col. 2, lines 63-64). Eaton has taught in claim 1 of the copying, duplication of a frame message, for Padovani's BSC to evaluate the frame quality having FQM field in the copied frame.

2. Claims 8-9, 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani in view of Gregg et al. (US 5,490,153).

Regarding **claim 8**, Padovani fails to clearly teach the error burst representation comprising error start indicator and error length indicator.

Gregg et al. (Gregg) teaches the system for recovering of the lost frames by transmitting of start bit 410, block cont 412 (as shown in Fig. 4, col. 4, line 37 to col. 5, line 10, by including the a bit 408 to indicate an additional information attached, such as start bit 410 and block count 412, in order to recover the lost data information by referring to the start bit 412 and block count 412). Gregg teaches the efficient recovery of lost frames by including the start bit and block count for re-transmitting the lost information (col. col. 1, lines 49-59; col. 2, lines 23-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovane above, and to include Gregg's start bit 410 block count 412 inf a frame, such that the lost data could be efficiently retransmitted.

Regarding **claim 9**, referring Fig. 4 and claim 8 above, Gregg has taught the binary code bits for the start bit 410 and block count 412 for the error lost burst counts in binary number.

Regarding **claim 52**, Gregg teaches the efficient recovery of lost frames by including the start bit and block count for re-transmitting the lost information (col. col. 1, lines 49-59; col. 2, lines 23-28).

Regarding **claim 53**, referring Fig. 4 and claim 8 above, Gregg has taught the binary code bits for the start bit 410 and block count 412 for the error lost burst counts in binary number.

3. Claims 16, 29, 58, 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani in view of Eaton, and further in view of Hendrickson et al. (US 5,974,584).

Regarding **claim 16**, Padovani and Bach does not clearly teach the threshold is associated with the error burst length.

Hendrickson et al. (Hendrickson) teaches the second predetermined threshold of the number of errors (error length) in a frame which is used to accept the frame for constructing the output signal, and none of the data portion of the subsequent frame are used until parity error is less than a second threshold (col. 10, lines 9-15; col. 11, lines 11-16). Hendrickson teaches an improved efficient of error controlling for discarding received data information when the received frame contains more than a threshold number of erroneous segments (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovane above, and to include Hendrickson's threshold for number of erroneous segment in a frame, such that system could efficiently controlling the received frame based upon the threshold for number of error in the frame.

Regarding **claim 29**, referring to Hendrickson above in claim 16 for the threshold is associated with the error burst length.

Regarding **claim 58**, referring to Hendrickson above in claim 16 for the threshold is associated with the error burst length.

Regarding **claim 70**, referring to Hendrickson above in claim 16 for the threshold is associated with the error burst length.

4. Claims 17, 30, 59, 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani in view of Eaton, and further in view of Neumiller et al. (US 6,226,283 B1).

Regarding **claim 17**, Padovani and Bach does not clearly teach the adjustable threshold, although Padovani has taught above the error burst length in the CRC, the Yamamoto metric associated with the error location.

Neumiller et al. (Neumiller) teaches the frame quality indicator FQI which can be dynamically adjusted to be the adjustable threshold for the forward error correction FEC (col. 4, lines 1-34). Neumiller teaches the efficient frame selection and routing based on the FQI, having the adjustable threshold for the FQI, such that frame selection can be flexibly selected based on the configurable threshold for the particular situation. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovane above, and to include Neumiller's adjustable threshold for the FQI, such that system could efficiently select and route the frame to the target base station.

Regarding **claim 30**, referring to Neumiller in claim 17 above for the adjustable threshold, associated with the error length and error location.

Regarding **claim 59**, referring to Neumiller in claim 17 above for the adjustable threshold, associated with the error length and error location.

Regarding **claim 71**, referring to Neumiller in claim 17 above for the adjustable threshold, associated with the error length and error location.

Response to Argument

5. Applicant's arguments with respect to claims 1, 3-4, 6-19, 21-23, 25, 27-32, 34-36, 38-45, 47-48, 50-61, 63-65, 67, 69-73, 75-77, 79-83 have been considered but are moot in view of the new ground(s) of rejection.

Regarding applicant's amendment for no teachings, for the combining an acceptable portion of the enhanced frame with an acceptable portion of the enhanced frame copy based on the error burst representations to from a combined frame of a higher quality than the enhanced frame; the error start and error length; the frame quality is above a threshold, below a threshold and the discarding the enhanced frame during combining, such as shown in claim 1, and in page 2, page 18-19 of applicant's remark, the ground of rejection has been changed to include Eaton (US 5,886,645).

Regarding the combining an acceptable portion of the enhanced frame with an acceptable portion of the enhanced frame copy based on the error burst representations to from a combined frame of a higher quality than the enhanced frame, Padovani-'830B1 teaches the generating of enhanced frame (305, Fig. 3, the 216 generate frame with inserted FQM 308 in col. 7, lines 47-67), the combining frames F(1)-F(3) with frames F(B)(1)-F(b)(3) with their associated FQM M(A)(1) to M(B)(3), to generate a higher valued single frame based on the selection higher FQM value (Fig. 5, col. 9, lines 19-40). Padovani further teaches the frame quality is above a threshold, below a threshold, and the discarding the enhanced frame during combining (the selector element resource will determine which packet 305 has the highest FQM value, for continue processing the frame with highest FQM quality value, and discard other frames with lower quality, for a threshold of highest FQM metric value, as shown in col. 8, line 60 to col. 9, line 2).

Easton et al. (Easton) teaches generating a frame copy, for the enhanced frame by duplicating first information frame into a second information frame (abstract), having duplicator 235 (Fig. 4), the duplicator operating for generating duplicated frame (Fig. 13, abstract; col. 11,

lines 25-38, col. 12, lines 47-65), the second information duplicates all of the first information (col. 18, lines 51-53), to combine the first and second information (col. 18, lines 36-40). Easton teaches an improved efficient technique for handling message transmission by duplicating a first message frame into a second message frame, to avoid message lost during message transmitting, with less delay (col. 2, line 48 to col. 3, line 4).

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703)-306-5615. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703)-305-4385.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Charles Chow C.C.

May 5, 2004.

EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600